CLAIMS

1. A viewing system (150), comprising acquisition means (151) for acquiring a sequence of images (IS), detection means (20) for detecting an object of interest (2, 17) in said sequence of images (IS),

   said detection means (20) comprising:
   - localizer detection sub-means (30) for detecting a location (L_1, L_2) of localizers related to said object of interest,
   - border detection sub-means (60) for detecting a location of borders (BL) related to said object of interest, using said location of localizers,

   and viewing means (154) for displaying said sequence of images (IS).

2. A viewing system (150) as claimed in claim 1, wherein said border detection sub-means (60) comprise:
   - initialization sub-means (61) for building an initial contour (EIC, RIC) of said borders, containing said localizers (L_1, L_2), from a priori knowledge about said object of interest,
   - active contour sub-means (62) for moving said initial contour (EIC, RIC) under the effect of forces related to said object of interest (2, 17) within said sequence of images (IS).

3. A viewing system (150) as claimed in claim 1 or 2, comprising enhancement means (70) for enhancing said borders using said location of borders (BL) and delivering a sequence of enhanced images (EIS).

4. A viewing system (150) as claimed in claim 1 or 2, comprising measurement means (71) for measuring characteristics (CM) of said object of interest using said location of borders (BL).

5. A viewing system (150) as claimed in claim 4, wherein said characteristics (CM) are widths of said object of interest along a length of said object of interest.

6. A viewing system as claimed in claim 1 or 2, wherein said acquisition means (151) are able to acquire at least two views of said object of interest, said viewing system

also comprising 3D representation means (72) for delivering a 3D representation
(3DR) of said object of interest from said views and said location of borders (BL).

7.   A viewing system as claimed in claim 6, wherein a cylindrical model is used by said
        3D representation means (72) when said object of interest has a tubular shape.

8.   A viewing system as claimed in one of claims 1 to 7, wherein said object of interest is
        a stenosis (2) or a stent (17) and said localizers are a tip (9) or balloon markers (13,
        14).

9.   A viewing system as claimed in claim 3, wherein said viewing means (154) also
        comprise local registering means (80) for registering a sequence of reference images
        (RIS(n)) with respect to said sequence of enhanced images (EIS, EIS(t)) so as to form
        a new sequence of enhanced images (NEIS(t)), in which said sequence of enhanced
        images and said sequence of reference images are combined.

10.   A viewing system as claimed in claim 3, wherein said viewing means (154) also
        comprise local registering means (80) for registering said sequence of enhanced
        images (EIS, EIS(t)) with respect to a sequence of reference images (RIS(n)) so as to
        form a new sequence of reference images (NRIS(n)), in which said sequence of
        enhanced images and said sequence of reference images are combined.

11.   A method, comprising a detection step (20) for detecting an object of interest in a
        sequence of images (IS), said detection step comprising sub-steps of:
        -    localizer detection (30) for detecting a location of localizers (L_1, L_2) related to
             said object of interest,
        -    border detection (60) for detecting a location of borders (BL) related to said
             object of interest, using said location of localizers.

12.   A device (153) comprising detection means (20) for detecting an object of interest in
        a sequence of images (IS), said detection means comprising:
        -    localizer detection sub-means (30) for detecting a location of localizers related
             to said object of interest,

- border detection sub-means (60) for detecting a location of borders (BL) related to said object of interest, using said location of localizers.

13. A computer program comprising a set of instructions for implementing a method as claimed in claim 11 when said program is executed by a processor.

14. A medical examination imaging apparatus comprising a viewing system (150) as claimed in one of the claims 1 to 10.